

Vivek Kumar Mishra

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Education

Indian Institute of Information Technology, Bhagalpur

Dec 2020 – Jul 2024

Bachelors of Technology, in Computer Science and Engineering

CGPA: 8.15/10

Experience

Software Development Engineer Intern

Feb 2024 - Present

Zscaler Inc.

- Designed and implemented a tool using **C** and **OpenSSL** to automate the generation of **SSL certificates**, reducing manual effort by **40%**.
- Streamlined the process of generating **PKCS12** keystores, cutting down processing time by **30%**.
- Implemented automatic generation of **X.509 certificates**, enhancing security protocol compliance and reducing errors by **50%**.
- Utilized **SHA256** and **RSA** algorithms to sign certificates, ensuring high security and integrity of the SSL certificates.

Software Development Engineer Intern [Certificate](#)

Jun 2023 - Jul 2023

Zscaler Inc.

- Worked with the **ZIA** Team to understand the components and architecture of the Product.
- Developed a Debugging Tool to Encode **Protobuf** Objects used as C structures into a text Format as Key-Value Pairs.
- Used **X-Macros** to develop **Weakly Typed Code** In **C**, Thereby reducing code duplication by **40%** and achieving Self Maintaining Codes .
- Experimented with **PL/PGSQL** and **PostgreSQL** to understand Object Relational Database Management System, Resulting in **25%** increase in database Query Performance.
- Implemented **Serialization** using **Protobuf** for Socket Communication over **TCP** in a Client - Server Architecture.

Projects

Online Judge [GitHub](#)

Jan 2022 - May 2022

- Developed a **HTTP API** using **NodeJS** to save a variety of Test Cases, and test a given solution Code against these Test Cases, during an online Coding Contest.
- Achieved a **Containerized** Execution system using **Docker** Thereby Reducing Execution time by **70%** over VM based solutions.
- Implemented **Message Queueing** for achieving an **asynchronous system** by using **RabbitMQ**, Therefore, Reducing Response time by **40%**.
- Utilized **Redis** for **Caching** the results produced by the Judge, Thus Improving System performance by **30%**.
- Stored Testcases** using **MongoDB** Database and **Mongoose** for Efficient data retrieval and Management.

Achievements

- Gained Maximum Rating on CodeChef: **2085 (5*)** under the Handle [vkm41101](#).
- Attained Maximum Rating on Codeforces: **1525 (Specialist)** under the Handle [deathBlade](#).
- Ranked **81st** at **ICPC Mathura-Kanpur Regional** site amongst the top 150 teams across the country. [Certificate](#)
- Secured a place in **Top 50** Innovations out of more than 14000 innovations from all over India in the annual ATL Innovation Marathon 2018-19 conducted by the NITI Aayog. Recognized in the NITI Aayog's [Ingenious 50 Coffee Table Book](#).

Skills

C/C++, Python, Javascript, NodeJS, Docker, Django, MongoDB, Rabbit MQ, Redis, Git, Protobuf, PostgreSQL, PL/PGSQL